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ABSTRACT

The Educational Research Unit Project ITL2 Study A in Singapore was quasi-experimental research designed to measure the effectiveness of non-traditional personnel and resource material package in developmental career guidance. Comparisons were made between experimental group and control group, and group guidance and individual counseling. The total samples comprised secondary one and two pupils (N=144) from two government schools in Singapore. A new instrument "Career Self-Concept Checklist" was specially constructed and validated in a pilot study for the pre- and post-test comparisons of treatment effects. The outcomes of this study showed that the package was effective in group guidance, the total sample's (N=32) gain in mean scores was statistically significant. The gain of mean scores in both Sec 1 and Sec 2 groups was significant. As for the control groups, there were no significant differences of mean scores in both the Bowen Secondary School and Thomson Secondary School groups. The treatment effect of individual counseling (N=16) using this package was also statistically significant. The mean scores difference in the pre- and post-tests, was a gain of 4.81 points which is slightly greater than the mean scores difference of 3.32 in the group guidance samples (N=32). As for all the control samples, there were no significant differences of mean scores at all. Generally speaking, the career guidance package has received very favorable responses from its users (teachers and pupils) in the experimental samples. The treatments were successful. (Author)

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THE EFFECTIVENESS OF CAREER GUIDANCE APPROACHES

by

LUI HAH WAH ELENA

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PREFACE

This report, prepared by Dr Elena Lui, is based on data collected in Study A of the ERU Project ITL2 on the Effectiveness of Career Guidance Approaches. The Project is led by Dr Esther Tan.

The report documents in detail this quasi-experimental study designed to assess the effectiveness of what may be called in the Singapore context "non-traditional" approaches to career guidance, namely, a group guidance approach and individual counselling. The resources used would be classifiable as 'non-traditional', too. The results of this very useful study are reported here.

Another 'product' coming out of this study is a career guidance package entitled **"Me and My Future: A Career Workbook"**, containing career self-concept enhancement activities meant for lower secondary school pupils. It is hoped that eventually this package will be made generally available to schools.

I would like to thank Dr Elena Lui for the detailed documentation, which will make the study and its findings easily accessible to teachers and other researchers.

3 October 1989

Ho Wah Kam
Head/ERU

ACKNOWLEDGEMENTS

The ERU Project 7A team members would like to express their deepest gratitude to the six research associates for their most valuable contributions in conducting the group guidance and individual counselling sessions. The kind cooperation of the principals and teachers of Bowen Secondary School and Thomson Secondary School during the administration of the pre-tests and post-tests was also very much appreciated.

We are also thankful to Dr Ho Wah Kam & Dr Tan Wee Kiat for their guidance & advice at various stages of this study.

The team would also like to thank the General Office Staff of the SFS and ERU for their assistance in the production of the Career Guidance package and this report.

Last but not least, the team was grateful to: (1) Mrs Angela Tan and Mr Sam Cheah, PS Department, for their help in the artwork of the package (2) our TG Department colleagues, Mr Poh Sui Hoi and Mrs Amy Fam, who have helped in the process of evaluation, (3) the volunteer counsellor, Mr Tay Siew Leng, for his contribution to the individual counselling for four secondary 2 boys at the final stage of the project when their teacher was on medical leave.

ABSTRACT

The Educational Research Unit Project ITL2 Study A was a quasi-experimental research designed to measure the effectiveness of non-traditional personnel and package in developmental career guidance. Comparisons were made between (1) experimental group and control group, and (2) group guidance and individual counselling. The total samples comprised Secondary one and two pupils (N = 144) from two government schools in Singapore. A new instrument "Career Self-Concept Checklist" was specially constructed and validated in a pilot study for the pre and post tests comparisons of treatment effects.

The outcomes of this study showed that the package was effective in group guidance, the total sample's (N=32) gain in mean scores was statistically significant. The gain of mean scores in both Sec 1 and Sec 2 groups was significant. As for the control groups, there were no significant differences of mean scores in both the Bowen Secondary School and Thomson Secondary School groups.

The treatment effect of individual counselling (N=16) using the package was also statistically significant. The mean scores difference in the pre and post tests, was a gain of 4.81 points which is slightly greater than the mean scores difference of 3.32 in the group guidance samples (N=32). As for all the control samples, there were no significant differences of mean scores at all.

Generally speaking, the career guidance package has received very favourable responses from its users (teachers and pupils) in the experimental samples. The treatments were successful.

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1. Objective of the Study

The main research question investigated by the Project Team was "How effective is the use of non-traditional approaches, including non-traditional personnel and technologies, in developmental career guidance?" This paper focuses on Study A which examined the effectiveness of the use of non-traditional resource material and personnel in the enhancement of career self-concept of lower secondary school pupils. The rationales for confining the study to secondary 1 and 2 pupils were: (1) the training packages focused on the development of career self-concept which, according to vocational psychologists, is a major developmental task at the early stage of adolescence; (2) at the beginning of secondary school pupils should start their discovery of the world of work, and (3) this package should help build a good foundation for the pupils' career development before they are "streamed" into the science, arts or commerce courses.

The term "Non-traditional" in the Singapore context was referred to any career guidance approach that did not include those activities identified in the 1987 survey among 1380 students from 14 secondary school and 3 junior colleges (Tan, 1988). Such activities included:

1. Inviting professionals and representatives from industries to conduct career talks in the schools (20.9% of the pupils in the sample participated in such activities).

2. Provision of print and non-print resource materials such as films and booklets in the schools (9.4% of the sample utlized this resource).

3. Field trips and visits to industries. (9.2% of the sample participated in such activities).

4. Career clubs in the schools as an ECA (1.2% of the pupils were members of career clubs in schools).

2. Research Design

This study adopted a quasi-experimental design to investigate the effectiveness of two innovative approaches in career guidance in the context of Singapore. The pre and post tests results of the experimental groups were compared to those of the control groups (no treatment). The effects of the treatment of group guidance were also compared with those of individual counselling. (Table 1)

Table 1 : The Research Design

Comparison I (confirmatory)	Pre-test		Post-test	
	EG	<	EG	
	‖		∨	
	CG	=	CG	
Comparison II (exploratory)	Pre-test		Post-test	
	EG	<	EG	EG
	‖		∨ or	∧
	EI	<	EI	EI

EG : Experimental Group Guidance
EI : Experimental Individual Counselling
CG : Control Group

The comparison between the experimental groups and control groups (Comparison I) was of a confirmatory nature. The expectation was that the post-test would show a significant increase of career self-awareness in the experimental groups. This would reflect the effectiveness of the package. As for the comparison between group guidance and individual counselling (Comparison II), it was of a exploratory nature. The inquiry was: which approach would result in higher career self-concept scores among the pupils?

For group guidance, the sample size of each group was 16 at each level of Sec 1 and Sec 2. For individual counselling, 8 pupils from each level were selected. There were equal numbers of both sexes in all sample groups. (Table 2)

Table 2: Sampling Design & Approaches Adopted for Experimental Groups

	Level/Personnel Involved		
	Sec 1	Sec 2	Total
Group Guidance	1 Teacher 16 Pupils (8 Boys & 8 Girls)	1 Teacher 16 Pupils (8 Boys & 8 Girls)	2 Teachers 32 Pupils
Individual Counselling	2 Teachers 8 Pupils (4 Boys & 4 Girls)	2 Teachers 8 Pupils (4 Boys & 4 Girls)	4 Teachers 16 Pupils
Total	3 Teachers 24 Pupils	3 Teachers 24 Pupils	6 Teachers 48 Pupils

Table 3 : Sampling of Experimental Group & Control Groups for Group Guidance

	EG		CG1		CG2
Experimental Groups	Bowen Sec Sch Group Guidance 1 Teacher 16 Pupils (8 Boys & 8 Girls) — Sec 1 1 Teacher 16 Pupils (8 Boys & 8 Girls) — Sec 2 Total: 2 Teachers 32 Pupils	Control Group 1	Bowen Sec Sch 16 Pupils (8 Boys & 8 Girls) — Sec 1 16 Pupils (8 Boys & 8 Girls) — Sec 2 Total : 32 Pupils	Control Group 2	Thomson Sec Sch 16 Pupils (8 Boys & 8 Girls) — Sec 1 16 Pupils (8 Boys & 8 Girls) — Sec 2 Total : 32 Pupils

The control groups had equal size of sample (N=16) at each level in the same school as well as in another school. Bowen Secondary School was chosen to be the pilot school because of the strong support from the principal and also the lower secondary population was "uncontaminated" in terms of career guidance activities. Thomson Secondary School was selected for the control groups because the student sample matched that of Bowen Secondary School in terms of having limited exposure to career guidance. (Table 3.)

3. Procedures

From February to May, 1988, the team developed a career guidance package of 9 sessions of career self-concept enhancement activities for lower secondary school pupils. The title of this package is "Me and My Future - A Career Workbook".* The theoretical framework was based on Donald Super's Developmental Self-Concept Theory (U.S.), while the structuring of the package adopted the approach of the Career Research and Advisory Council Breakout series (U.K.)

In July 1988, two team members and the Project Leader took turns to conduct three training sessions for the six research associates in Bowen Secondary School. These research associates were the teachers recommended by their principal based on two criteria, i.e. (1) they had a genuine interest in career guidance, and (2) they were keen to participate in this study.

From July 29 to October 7, nine sessions of the career guidance package were conducted by these six research associates. The team members also took turns to observe the group guidance sessions which usually took place on Fridays during the school's community singing hour. This time slot was chosen to avoid any interruption during curriculum time.

The samples for the total group and sub-groups of group guidance are as follows:

* This package is available for reference at the Department of Educational Testing, Guidance and Counselling, Institute of Education. The table of contents is at Appendix I.

Table 4: Distribution of Sample for Group Guidance by Level & Sex

	Sec 1		Sub Total	Sec 2		Sub Total	TOTAL
	Boy	Girl		Boy	Girl		
Experimental Group (EG)	8	8	16	8	8	16	32
Control Group 1 (CG1)	8	8	16	8	8	16	32
Control Group 2 (CG2)	8	8	16	8	8	16	32
Total	24	24	48	24	24	48	96

The samples for individual counselling by level and sex are shown in Table 5.

Table 5: Distribution of Sample for Individual Counselling by Level & Sex

	Sec 1		Sub Total	Sec 2		Sub Total	TOTAL
	Boy	Girl		Boy	Girl		
Individual EI	4	4	8	4	4	8	16
Individual CI1	4	4	8	4	4	8	16
Individual CI2	4	4	8	4	4	8	16
Total	12	12	24	12	12	24	48

The participants of group guidance and individual counselling sessions were selected at random (1 in 3) from the class registers of Secondary 1A, 1B, 2A and 2B. Samples for the control group were also assigned in a similar manner.

4. Time Frame

The project proceeded according to the time frame below:

Date	Activities
Feb - May '88	* Development of package and instrument * Selection of a pilot school, teachers (research associates) and pupils (samples)
June '88	* Package ready for piloting
Jul - Aug '88	* Pre-test (July 15) * Introduction to career guidance package * Training: - Career guidance concepts and skills - Basic counselling (Helping Skills) - Working with groups (July 9, 16, and 23 Saturday mornings: 8.30am - 12.30pm)
Aug - Oct '88	* Implementation (July 29 / Aug 12, 19, 26 / Sept 2, 16, 23, 30 / Oct 7) (Every Friday, 12.40 pm - 1.40 pm)
Oct - Nov '88	* Post-test (14 Oct) * Evaluation (Interviews w/pupils & teachers) * Data Analysis
May '89	* Report submitted to the Board of Postgraduate Studies & Research

5. Instrumentation

The treatment effect was measured by a 25-item force-choice checklist named "Career Self-Concept" * developed by this team in April - May, 1988. The original design had a total of 30 items, 6 items for each subscale: Values, Aptitude, Myself, Interest and Parents. After the pilot test (administered to a sample of 100 lower secondary school pupils), the team decided to drop 5 weak items and keep the length of the test to 25 items. The maximum possible scores is 25 and the minimum is 0. The keys of these items, the facility indices and discrimination indices are presented at Appendix II. The reliability of the self-concept checklist in the pilot test was acceptable as the KR 20 of the total scale was 0.77.

In mid July, 1988 the pretest was administered to 130 pupils of secondary one and two classes at Bowen Secondary School and to the same number of pupils at Thomson Secondary School. The results showed that this instrument had acceptable reliability (KR 20 = 0.76). Most of the 25 items' discrimination power was above 0.20. The range was from 0.04 to 0.57. The total scale and subscales' correlations ranged from 0.36 to 0.81. The Parent Subscale was very weak (KR 20 = -0.01) due to some poor discriminating items such as item No. 5, "My parents expect me to do my best in my future job," and No. 17 "My parents have too high a expectation of my future job." Most pupils scored high on these items.

The post-test was conducted with the same samples in mid October, 1988. The number was reduced to 257 because of three pupils' absence. The test results showed similar features as the pre-test, with an increase of reliabilities of the total scale (KR 20 = 0.82). Although the Parent Subscale still remained rather weak, all the items increased in discriminative power, ranging from 0.09 to 0.62. (Appendix III). The concurrent validity was tested by administering a locally validated instrument for lower secondary pupils, "Self-Esteem Checklist" (LUI), at the same time to the control group samples. The correlation coefficient was relatively high (r = 0.54). Thus the concurrent validity was established.

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* This instrument is available for reference at the Dept of Educational Testing, Guidance and Counselling, Institute of Education.

Generally speaking, the Career Self-Concept Checklist has shown acceptable reliability and validity in the measurement of lower secondary pupils' career self-concept. The main features of the instrument in the pre-test and post-test also remained consistent.

6. Results

The pre and post tests method was used to measure the treatment effects of the career guidance sessions. The comparison of pre-test and post-test results showed that the total sample of experimental groups (N=32) had a statistically significant gain of mean score of 3.32. The t-test value is 4.57 ($P < 0.001$). When the outcomes of pre and post tests of the control groups were compared, there was no significant gain in mean scores. (Table 6).

Further investigation of treatment effects on the two experimental sub-groups (Bowen's Sec 1 and Sec 2 pupils) indicated that both sub-groups had significant gains of mean scores, at 0.01 level. Sec 1 gained 3.69 points ($t=3.28$) while Sec 2 gained 2.94 points ($t=3.12$). (Table 7)

The measure of treatment effect for the 16 individual counselling samples showed that there was also a significant gain of 4.81 points in the post-test mean score, ($t=4.73$, $P < 0.001$) (Table 8).

Table 6: Comparisons of Pre & Post-test Mean Scores (Group Guidance)

Group	N	Pre-test Mean	Pre-test S.D.	Post-test Mean	Post-test S.D.	Mean Scores Difference	t
Experimental (Bowen)	32	15.34	3.63	18.66	4.34	3.32	4.57 *
Control (Bowen)	32	16.25	4.68	17.13	4.13	0.88	1.30
Control (Thomson)	32	15.75	4.04	16.94	4.56	1.19	2.20

* $P < 0.001$

Table 7: Comparisons of Pre & Post-test Mean Scores of Experimental Groups (Comparison by Level)

Experimental Group	N	Pre-test Mean	Pre-test S.D.	Post-test Mean	Post-test S.D.	Mean Scores Difference	t
Secondary 1	16	16.31	3.11	20.00	4.50	3.69	3.28 *
Secondary 2	16	14.38	3.95	17.31	3.90	2.94	3.12 *

* $P < 0.01$

Table 8: Comparisons of Pre & Post-test Mean Scores of Experimental Groups (Comparison by Approach)

Treatment Approach	N	Pre-test Mean	Pre-test S.D.	Post-test Mean	Post-test S.D.	Mean Scores Difference	t
Group Guidance	32	15.34	3.63	18.66	4.34	3.32	4.57 *
Individual Counselling	16	15.75	4.68	20.56	3.33	4.81	4.73 *

* $P < 0.001$

The effect size of group guidance of the experimental group as compared to that of the control group at Bowen Secondary School is 0.36. (Table 9A). When compared with the control group at Thomson Secondary School, the effect size is 0.38, very close to the effect size of the Bowen sample. (Table 9B)

Table 9A: Effects of Group Guidance Treatment (Bowen vs. Bowen)

Experimental Group Guidance	Post Test $\bar{X}e$	Post Test SDe	Control Group	Post Test $\bar{X}c$	Post Test SDc	Effect Size
Bowen	18.66	4.34	Bowen	17.13	4.31	0.36

Table 9B: Effects of Group Guidance Treatment (Bowen vs. Thomson)

Experimental Group Guidance	Post Test $\bar{X}e$	Post Test SDe	Control Group	Post Test $\bar{X}c$	Post Test SDc	Effect Size
Bowen	18.66	4.34	Thomson	16.94	4.56	0.38

Note : Effect size = $(\bar{X}e - \bar{X}c) / SDc$

The effect size of individual counselling of the experimental samples as compared to that of the control samples at the Bowen Secondary School is 0.40 (Table 10A). This is quite comparable with the findings of the group guidance approach with the Bowen groups (0.36). However, the effect size of individual counselling of the Bowen samples as compared to that the Thomson Secondary School samples is unexpectedly great, 0.96.

Table 10A: Effects of Individual Counselling Treatment (Bowen vs. Bowen)

Experimental Individual Counselling	Post Test $\bar{X}e$	SDe	Control Group	Post Test $\bar{X}c$	SDc	Effect Size
Bowen	20.56	3.33	Bowen	18.31	5.65	0.40

Table 10B: Effects of Individual Counselling Treatment (Bowen vs. Thomson)

Experimental Individual Counselling	Post Test $\bar{X}e$	SDe	Control Group	Post Test $\bar{X}c$	SDc	Effect Size
Bowen	20.56	3.33	Thomson	16.75	3.99	0.96

The comparison of mean scores differences of the pre and post tests showed that the individual counselling samples in Bowen Secondary School had a gain of 4.81 points ($t=4.73$ $P< 0.001$), the control samples in Bowen Secondary School gained 1.44 ($t=0.81$, n.s.) and the control samples in Thomson Secondary School gained merely 0.88 ($t=1.09$, n.s.), (Table 11). The small gain of mean scores and relatively small standard deviation of the post-test (SDc = 3.99) in the Thomson samples could explain why the effect size is so great when the mean scores gains of the Bowen experimental samples and Thomson control samples were compared.

Table 11: Comparison of Pre & Post-test Mean Scores (Individual Counselling)

Sample	N	Pre-test Mean	Pre-test S.D.	Post-test Mean	Post-test S.D.	Mean Scores Difference	t
Experimental (Bowen)	16	15.75	4.68	20.56	3.33	4.81	4.73 *
Control (Bowen)	16	16.87	4.80	18.31	5.65	1.44	0.81
Control (Thomson)	16	15.88	4.06	16.75	3.99	0.88	1.09

* $P < 0.001$

7. Evaluation of the Career Guidance Package

In addition to the above-mentioned measurement of treatment effects, the team also adopted a three-pronged approach to evaluate the career guidance package, "Me and My Future - A Career Guidebook". The three methods of evaluation were:

1) interviews with all the six teachers (research associates) who used the package for the guidance/ counselling sessions

2) interviews with 50% of the pupils in the experimental group sample (by random selection)

3) assessment of the pupils' files (written work and artwork), also by random selection.

Due to time constraint at the school and the heavy workload of the team members, the evaluation of pupils' responses and performance could cover only half of the samples.

1) **Interviews with Research Associates:**

The overall responses from the six teachers who conducted the career guidance activities, were very favourable. They found the package meaningful and useful. They followed the sequence very closely and tried their best to explain the instructions clearly to their pupils.

All the six of them, except one, completed the package according to the timeframe. The exceptional one was on leave due to some medical reasons. It was fortunate that the team managed to engage a volunteer, who was very experienced in career guidance, to relieve this teacher during the last three sessions.

To summarize their suggestions for the improvement of this package, here are some points for the team to consider:

i) There should be a teacher's guidebook to supply more ideas and information, especially relating to the categories of abilities in the self-assessment (Activities 4 & 5), also about vocational aspirations and hopes (Activity 8).

ii) These teachers felt inadequate when they had to talk about the various types of jobs in the fields different from their own. They expressed great concern for the lack of substantial resource materials in job information.

iii) The pupils in the group guidance sessions need to have some time to "break the ice", to get to know each other through some familiarization games. Therefore, the package should include warm up activities at the beginning of each session.

iv) To involve parents in Activity 7, "Looking into the Future" posed a problem to the pupils whose parents were illiterate or not English educated. It would be more convenient for the pupils to record (write or draw) their parents' responses after talking to them, instead of asking the parents to do the writing or drawing. Furthermore, the pupils need guidance in how to talk to their parents on this topic.

v) In terms of the language used in the package, some pupils found it difficult to understand certain terms and situations, eg. Country Club. As a matter of fact they had restricted exposure to the life styles within their HDB neighbourhood and not beyond.

vi) One teacher suggested that there should be a pre & post comparison of pupils' perceptions of their own future. This approach could evaluate the effect of the package and assess the changes in the pupils.

vii) The "Me Mobile" was a very enjoyable and meaningful exercise. It should be included in the package rather than just serving as an optional activity. The "Self Collage" was another effective exercise for arousing interest, and also for enhancing self-knowledge. Teachers' samples of "Self Collage" served as good stimuli to motivate their pupils.

2) **Interviews with Pupils:**

Three weeks after the conclusion of the career-guidance sessions, three team members and another colleague from the TG Department interviewed 24 pupils (50% of the sample) at the school & obtained the following feedback:

i) All these pupils claimed that they enjoyed all the sessions. The most enjoyable one was "Values Auction" and the next was "Who Am I?".

ii) They liked these activities because they

- had learned more about themselves.
- learned what they liked/disliked about jobs.
- had better ideas of what to choose as a career.
- made friends and had fun.
- had a chance to talk to parents about their future.

iii) The most helpful session was "What Are My Interests?" This was followed by "What Skills And Abilities Do I have?", "Things I Value" and "Looking Into My Future".

iv) The difficulties faced by them were mainly as below:

"Don't understand some words" (5 pupils)
"Had to find pictures/photos and information for the Collage" (2 pupils)

9 pupils claimed that they had no difficulties at all. One pupil said he was too shy to talk in the group while another one mentioned "not sure about myself".

v) The responses pupils got from their parents were reported as below:

- Parent(s) had different aspirations & wouldn't budge. (5 Pupils)
- Parent(s) had different aspirations but were open & supportive of Pupil's aspiration. (6 Pupils)
- Parent(s) helped Pupil to think of jobs. (4 Pupils)
- Parent(s) left choice to Pupil. (3 Pupils)
- Parents & Pupil's choice were very similar. (4 Pupils)

vi) For the improvement of this package, pupils suggested: the inclusion of additional activities on topics such as feelings, friendships, understanding parents and jobs information.

3) **Assessment of Pupils' Files:**

One member of the team and another colleague of the TG Department assessed 24 pupils' career guidance files. The selection was done randomly, one in two. The main points of their observations are as follows:

1. Activity 1 "Who am I?" - did not seem to have much relation to careers in general.

2. Activity 2 "What are My Interests?" - For the last discussion question, pupils didn't relate their interests to career, although they were aware of their interests.

3. Activity 3 Self-Evaluation of Vocational Interests - Last discussion question was not answered by many of the pupils.

4. Activity 4 Skills & Abilities - Could have some discussion questions attached so that there would be way to know if objectives have been fulfilled.

5. Activity 5 Linking Skills & Abilities to Jobs - Need a "model answer" for teachers to see if pupils are on the right track. Since there wasn't a model answer, it was difficult to assess if objectives had been fulfilled.

6. Activity 6 "Values Auction" - Some pupils did not fill in their bids. More coaching of teachers is required in training them to use this activity effectively.

These points would be very useful for the improvement of the package.

8. Conclusion

The team's main task was to investigate the effectiveness of a career guidance package designed to enhance the career self-concept of lower secondary school pupils. The outcomes of this study showed that the package was effective in group guidance, the total sample's (N=32) gain in mean scores was statistically significant. The gain of mean scores in both Sec 1 and Sec 2 groups were significant. As for the control groups, there were no significant differences of mean scores in both the Bowen Secondary School and Thomson Secondary School groups.

The treatment effect of individual counselling (N=16) using the package also was statistically significant. The mean scores difference in the pre and post tests, was a gain of 4.81 points which is slightly greater than the mean scores difference of 3.32 in the group guidance samples (N=32). As for all the control samples, there were no significant differences of mean scores at all.

Generally speaking, the career guidance package has received very favourable responses from its users (teachers and pupils) in this study. Yet there is still room for improvement in the various areas e.g. more guidelines for teachers, more provision for group interaction, more information on the world of work, etc. Although it was meaningful to involve the parents, the pupils need more preparation and guidance in talking to their parents on the topic of career planning. Teachers too, would need more training in this particular area.

On the whole, the pilot test of the package on the enhancement of Career Self-Concept has proven its effectiveness to a certain extent. The process of conducting this study, including the development of the Career Self-Concept package and the Career Self-Concept Checklist, was really a very valuable research experience for the team members and research associates. Furthermore, the pupils involved in the piloting of the package have benefitted, in various degrees, in enhancing their career self-awareness as well as career maturity.

There were significant increases of mean scores in all the experimental samples in both approaches in this quasi-experimental study. This is encouraging for educational researchers who are interested in the development of non-traditional methods, resource materials, technologies and personnel in career guidance and related fields.

9. Recommendations for Follow-Up Action

If manpower and funds are available, one possible follow-up action to this project could be further refinement of the work sheets based on feedback obtained. The team could also work on a Teacher's Guide and include "warm up" exercises for all the sessions. Having done this, the resource materials could then be compiled into a comprehensive training package and made available for use in the schools.

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ME AND MY FUTURE

A CAREER WORKBOOK

INTRODUCTION

This booklet has been designed to help students find out about their interests, abilities, values and to understand that finding a suitable career means to a certain extent, knowing ourselves. To really benefit from this booklet you should carry out each activity as instructed, and always remember to answer questions truthfully. You should not put down what others think but what you think. We hope you will enjoy these activities and come out feeling great!

CONTENTS

1. ORIENTATION AND INTRODUCTION WHO AM I?
2. WHAT ARE MY INTERESTS?
3. LOOKING AT MY INTERESTS IN GREATER DETAIL
4. WHAT SKILLS AND ABILITIES DO I HAVE?
5. WHAT SKILLS AND ABILITIES DO I HAVE? (CONTINUED)
6. THINGS I VALUE
7. LOOKING INTO THE FUTURE
8. TALKING ABOUT MY ASPIRATIONS AND HOPES
9. WHAT I'VE LEARNED ABOUT "ME"

ITEM ANALYSES OF CAREER SELF-CONCEPT SCALE

		Key: YES	Key: NO	Pre F.I.	Post F.I.	Pre D.I.	Post D.I.
1.	I want to choose a job that is most satisfying to me.	[X]	[ ]	.98	.96	.06	.15
2.	I am good at doing many things that are related to my future.	[X]	[ ]	.34	.50	.51	.62
3.	I don't know very much about myself.	[ ]	[X]	.61	.70	.45	.52
4.	I don't know what kind of jobs I'm interested in.	[ ]	[X]	.50	.67	.54	.53
5.	My parents expect me to do my best in my future job.	[X]	[ ]	.92	.91	.12	.23
6.	I know what are my strengths and weaknesses in the area of work/job.	[X]	[ ]	.73	.70	.46	.43
7.	I often think about my future.	[X]	[ ]	.73	.79	.41	.38
8.	I have never thought of what will be important to me in my future career.	[ ]	[X]	.66	.76	.51	.44
9.	I hardly know what my interests are.	[ ]	[X]	.70	.75	.44	.48
10.	My parents don't care much about my future.	[ ]	[X]	.95	.96	.23	.27
11.	I don't know if my interests are related to my future career.	[ ]	[X]	.30	.43	.50	.55
12.	My parents would expect me to take the job they choose for me.	[ ]	[X]	.92	.92	.10	.14
13.	I don't care if my future career is meaningful to me or not.	[ ]	[X]	.87	.91	.26	.33
14.	I have little idea what I am good at.	[ ]	[X]	.30	.40	.35	.47
15.	I often wonder what kind of a person I am.	[ ]	[X]	.21	.27	.21	.24
16.	I am interested in learning about possible jobs for me.	[X]	[ ]	.84	.92	.20	.31
17.	My parents have too high an expectation of my future job.	[ ]	[X]	.87	.86	.04	.09
18.	I know what I would like to get out of my future career.	[X]	[ ]	.43	.54	.49	.57
19.	I can get a job with a bright future.	[X]	[ ]	.87	.86	.51	.55
20.	I generally have confidence in myself.	[X]	[ ]	.87	.72	.54	.53
21.	My interests are related to my future career.	[X]	[ ]	.55	.61	.45	.57
22.	I don't know what work values are.	[ ]	[X]	.53	.64	.39	.52
23.	My parents and I have talked about my future career.	[X]	[ ]	.47	.60	.33	.47
24.	I don't think I have the ability to get a good job after leaving school.	[ ]	[X]	.53	.64	.57	.53
25.	I have a pretty good idea about myself.	[X]	[ ]	.60	.69	.56	.54

D864/EL-1

RELIABILITIES OF CAREER SELF-CONCEPT TOTAL SCALE AND SUBSCALES

Number of Samples	Pre	Post
	260	275

Subscales	No. of Items	Max Score	$\bar{X}$ Pre	$\bar{X}$ Post	SD Pre	SD Post	KR 20 Pre	KR 20 Post
Value	5	5	3.46	3.61	1.06	1.00	0.32	.44
Aptitude	5	5	2.57	2.92	1.42	1.51	0.57	.62
Myself	5	5	2.62	3.16	1.37	1.27	0.54	.46
Interest	5	5	2.95	3.39	1.33	1.37	0.51	.60
Parents	5	5	3.92	4.07	0.82	0.80	0.01	-.01
Total	25	25	15.74	17.37	4.21	4.61	0.76	.82

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